

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Zheng J. Li, et al.

Examiner: PESELEV, ELLI

APPLICATION NO.: 10/652,933

Group Art Unit: 1623

FILING DATE: AUGUST 28, 2003

TITLE: CRYSTAL FORMS OF AZITHROMYCIN

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER RULE §131

I, Richard Todd Darrington, declare that:

- 1. I received my Doctor of Philosophy degree in Pharmaceutical Chemistry from the University of Utah in December 1993.
- 2. Since December 1993, I have worked for Glaxo Inc., Pfizer, Inc. in Groton-CT and Boehringer Ingelheim to study new pharmaceutical formulations.
- 3. During my tenure at Pfizer, Inc. and prior to May 8, 1998, I participated in the conception and reduction to practice of a pharmaceutical composition containing substantially pure Form F azithromycin (referred to as "ethanol solvate Lot 34503-138-1" in the notebook which is attached herein as exhibit 1). Exhibit 1 includes two pages, one page from my notebook and one from that of William N. Soby who worked under my supervision at the time. Exhibit 1 is redacted as to the dates which all occurred before May 8, 1998.
- 4. Exhibit 1 describes a pharmaceutical composition containing ethanol solvate (Lot 34503-138-1) and a pharmaceutically acceptable carrier, Miglyol 812. The composition was made prior to May 8, 1998.

5. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the Untied States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

RICHARD TOOD DARRINGTON

JUL 1 3 2005 E

EDH Sohore 6+ 34503-138-1

Calculations for Mass of D	rug or Salt-Percer	itage by Weight Methoc	<u> </u>		
	<u> </u>	! Drug	Molecular	Density	Da
Drug Form (salt)	EtOH Solvate	Form	Weight	mg/mL	Percent Purity
Lot Number	34503-138-1	1.	Weight	mgint	runty
		Azithromycin	785	·· 1.132	92.
Percent Purity	91.9	.Azithromycin HCl	821.5	1.170	10
Density (g/mL)	1.132	Azithromycin HCl	821.5	i	89.
		Azithromycin 2HCl	858	1.178	10
Vehicle	Miglyol 812	Monopamoate Salt	1137.36		63.
Lot Number .		Monopamoate Salt	1137.36	1.577	61.
		Monocamsylate Salt	981.31		
Desired Activity* (mg/mL)	100 i	Decanote	921.23	1.210	86.1
Target Volume (mL)	35.0	Mesylate Salt .	1		88.6
Mass of Drug to Add	3.8089		 	·	
Volume Occupied by Drug	3.36		· .		
Volume of Vehicle to Add	31.64		1		
*Based on azithromycin dihy	drate	-!	 	·	

ARTA (vid 2) 3.8086.

We distrated while recons oil and did not record.

Sime we one low on Silverta do not have enough to ne do
will have to extrate and one ARID pitally detained.

milyel 8/2 10g bull all 402 21.712g

Lot # 37791-80-1 A suspension of Azithromycin ethanol solvate (CP-62,993-4x) in Mighael at 100 mgA/ml Prepared

Tan Brenson

+ ****

JUL 1 3 2005

Quet Solubity Screen on New Salt (Continued from pay 29)

			N	. E	w Mass	Mass with	Mass of	Weighed Mass	Final
Vial	Salt	LOL	Number	Emp	fiel (e)	Selt (g)	Salt (mg)	of Sult (mg)	Mass (g)
Number		<u>. </u>		(OB. \	/id (g)				
		3-1		-		4 2469	10.00	10.1516	6.4939
1	CP-62,993-13	3450	3-140-1		6.235		10.00		
7	CP-62,993-13	3450	13-140-1	<u> </u>	6.3841	-			6.429
	CP-62,993-42	3450	03-143-1	3	6.3200				
	CP-62,993-42	3450	03-143-1		6.337		-		
<u> </u>	CP-62,993-?	345	03-138-1		6.312				+
	CP-62.993-?		03-138-1	.1	6.313	6.3237			4
6	CP-62,993-42				6.283	8 6.2960			1
<u> </u>	CP-62,993-42	245	03-143-7	-	6.309	6.3210	11.20		
8		345	03-138-2	 	6,298		10.50		
. 9	CP-62,993-?				6.315		10.8	10.829	10.102
10	CP-62,993-?	1343	03-138-2	-		+			<u> </u>
		!			9.851	9.85	6 4.2	0 4.131	
28	CP-62,993-13	34	503-140-		9.759	2.000		0 4.030	
49	CP-62,993-42	2 34	503-143-	<u> </u>				1 100	1 17.77
5a	CP-62,993-?	34	503-138-	1	9.77	9.760			

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	·			Calculated	Measured	Solvent	Schubility
Vial	Salt	Lot Number	· Mass of		Volume (uL)		
	·		Solvent (g)	Volume Added (uL)	VOID ()		
iember					250	Water	40.6
	CP-62,993-13	24502.140-1	0.2481	249	4000	Mighyol 812	
1.	CP-62,993-13	24502 140-1	3.7984	4037	4000	Manyot 612	105.7
2	CP-62,993-13	34303-140-1	0.0992			Weter	
3	CP-62,993-42	34503-143-1				Miglyol 812	
4	CP-62.993-42	34503-143-1	1	2000	4000	Water	2.4
	CP-62-993-7	34503-138-1	3.77	2606		Migtyol 812	4.1
6	CP-62,993-7	34503-138-1	2322	100		West	60.
	CP-62,993-42	34503-143-2	0.17/	401		Mighyol 81	2 21
	CP-62,993-42	34503-143-2	3.781	410	400		2.1
8		34503-138-	4.167	8 419		Miglyol 81	2 2.
9	CP-62,993-7			9 401	51		
10	CP-62,993-7				1	O Miglyol 81	2 0.
			7.495	796	5 800	U Marie Val	
2a	CP-62,993-1	3 34503-140-				0 Mighyol 81	0
40	CP-62,993-4	2 34503-143-			5: 800	O Water	
59	CP-62,993-?		1 7.99	3			

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Cal St Continued on page 33	•
Signed William 1. Aly	Date!
Witnessed Schip Sharp	Date
Witnessed	